

ABSTRACT OF THE DISCLOSURE

A gate oxide film and a first layer of a multi-layered gate electrode are stacked on a substrate and by a gate prefabrication technique, an oxide layer
5 of an element isolation region is formed in a self-alignment manner using the first layer of the gate electrode as a mask, impurities for a transistor channel control are doped by ion implantation via the first layer of the gate electrode and the gate oxide
10 film, and the doped impurities are activated by a heating step, whereby an impurity profile at the transistor channel portion is precisely formed.